Amendments to the Claims

Please amend claims 1, 21-25; cancel claims 16-17; and add new claims 27-32, all as shown below. All pending claims are reproduced below, including those that remain unchanged. This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method for discriminatively selecting keyframes representative of segments of a source digital media, comprising the steps of:

obtaining said source digital media for which keyframes are to be selected, wherein said ~~digital information contains~~ source digital media comprises a plurality of segments, wherein said plurality of segments comprises a plurality of frames, said plurality of frames comprising candidate keyframes;

pre-processing said ~~digital information~~ source digital media to obtain a plurality of feature vectors, said feature vectors being representative of the candidate keyframes; [[and]]

determining in-class similarity values for said candidate keyframes, wherein the in-class similarity values are determined by comparing the feature vectors for the candidate keyframes to other feature vectors found solely within the same segment the candidate keyframes come from;

determining out-of-class similarity values for said candidate keyframes, wherein the out-of-class similarity values are determined by comparing the feature vectors for the candidate keyframes to other feature vectors found solely outside of the segment the candidate keyframes come from; and

discriminatively selecting a keyframe for each segment based on both the in-class similarity values and the out-of-class similarity values of the candidate keyframes, ~~wherein the keyframe for each segment is selected by comparing a candidate keyframe of one segment with other frames from the remaining plurality of segments and determining a dis-similarity value of said candidate keyframe dependent upon said step of comparing,~~ wherein each selected keyframe is both representative of the segment the selected keyframe originates from and distinguishable from other selected keyframes which are representative of the remaining plurality of segments.

2. (Cancelled)

3 (Original) The method of Claim 1, wherein said source digital media includes a plurality of

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items of digital media.

4.   (Original) The method of Claim 3, comprising the step of:
        concatenating said plurality of items of digital media into one item of source digital media.

5.   (Original) The method of Claim 1, wherein said source digital media is digital video.

6.   (Original) The method of Claim 1, wherein said source digital media is a digital image.

7.   (Original) The method of Claim 1, wherein said source digital media is digital audio.

8.   (Original) The method of Claim 1, wherein said source digital media is a digital text.

9.   (Original) The method of Claim 1, wherein said source digital media is a concatenation of digital video and a digital image.

10.   (Original) The method of Claim 1, further comprising the step of:
        determining, subsequent to said step of obtaining, if said source digital media includes more than one item of digital media.

11.   (Previously Presented) The method of Claim 10, further comprising the step of:
        concatenating said digital media into one item of source digital media if it is determined that said source digital media includes more than one item of digital media.

12-20. (Cancelled)

21.   (Currently Amended) A computer-readable medium having executable instructions stored thereon that performs the method of discriminatively selecting keyframes representative of digital media, comprising the steps of:
        obtaining said digital media for which keyframes are to be selected;
        segmenting said digital ~~information~~ <u>media</u> into a plurality of segments<u>, wherein said plurality</u>

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of segments comprises a plurality of frames, said plurality of frames comprising candidate keyframes;

pre-processing said ~~digital information~~ <u>digital media</u> to obtain a plurality of feature vectors<u>, said feature vectors being representative of the candidate keyframes</u>; [[and]]

<u>determining in-class similarity values for said candidate keyframes, wherein the in-class similarity values are determined by comparing the feature vectors for the candidate keyframes to other feature vectors found solely within the same segment the candidate keyframes come from;</u>

<u>determining out-of-class similarity values for said candidate keyframes, wherein the out-of-class similarity values are determined by comparing the feature vectors for the candidate keyframes to other feature vectors found solely outside of the segment the candidate keyframes come from; and</u>

discriminatively selecting a keyframe for each segment <u>based on both the in-class similarity values and the out-of-class similarity values of the candidate keyframes,</u> ~~wherein the keyframe for each segment is selected by comparing a candidate keyframe of one segment with other frames from the remaining plurality of segments and determining a dis-similarity value of said candidate keyframe dependent upon said step of comparing,~~ wherein each selected keyframe is both representative of the segment the selected keyframe originates from and distinguishable from other selected keyframes which are representative of the remaining plurality of segments.

22.   (Currently Amended) The method of Claim 1, wherein the candidate keyframe having the largest goodness function value within each segment is discriminatively selected to be the keyframe for the segment it originates from<u>, wherein the goodness function value is calculated based on both the in-class similarity values and the out-of-class similarity values</u>.

23.   (Currently Amended) The method of Claim 22, wherein the goodness function value for each candidate keyframe comprises a subtractive figure, wherein the out-of-class ~~dis-similarity~~ <u>similarity</u> value is subtracted from the in-class similarity value for each candidate keyframe.

24.   (Currently Amended) The method of Claim 22, wherein the goodness function value for each candidate keyframe comprises a rational figure, wherein the in-class similarity value is divided by the out-of-class ~~dis-similarity~~ <u>similarity</u> value for each candidate keyframe.

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25. (Currently Amended) The method of ~~Claim 16~~ <u>Claim 22</u>, wherein the in-class similarity values and the out-of-class ~~dis-similarity~~ <u>similarity</u> values are biased when determining the goodness function value for each candidate keyframe.

26. (Previously Presented) The method of Claim 1, wherein said step of discriminatively selecting a keyframe includes the step of discriminatively selecting a plurality of keyframes as being representative of each segment.

27. (New) The method of Claim 1, wherein the feature vectors are obtained based on low-order discrete cosine transform coefficients.

28. (New) The method of Claim 1, wherein the feature vectors are obtained for a group of frames.

29. (New) The method of Claim 1, wherein the feature vectors are obtained for each frame.

30. (New) The method of Claim 1, wherein the feature vectors are obtained for only a portion of the frames.

31. (New) The method of Claim 1, wherein the in-class similarity values and out-of-class similarity values are determined utilizing linear discriminant analysis.

32. (New) The method of Claim 1, wherein the in-class similarity values and out-of-class similarity values are determined using latent semantic indexing.